

# MISTNET

Volume 6 No 2

April-June, 2005

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INDIAN BIRD CONSERVATION NETWORK



# Radio tagging the Jerdon's Courser

## "PITY-NOT-TO-DO-IT"

"DID-HE-DO-IT"... "DID-HE-DO-IT"

It was calling as soon as we released from our hands after fixing the radio-tag. It may feel bit strange to have a radio-tag on its back for sometime but we know that it will get used to it soon. It was looking at us and yelling. It sounds like "Pity-to-do-it...Pity-to-do-it"...but I was telling to that pretty bird "No, it is good to have it". Red-wattled Lapwing *Vanellus indicus* is one of the few lucky birds in India to have a radio-transmitter fixed on its body. Very few birds have been studied through radio-telemetry in India. The purpose of fitting the radio-tag on this beautiful bird is to save the rare and enigmatic Jerdon's Courser *Rhinoptilus bitorquatus*.

Strange thought, why tagging the Lapwing to save the Courser? The Bombay Natural History Society (BNHS) and the Andhra Pradesh Forest Department (APFD) have played a pivotal role in the rediscovery and in saving the Jerdon's courser. Soon after it was rediscovered near Reddipelli village, Cuddapah District in 1986 that place was declared as Sri Lankamasaleswara Wildlife Sanctuary by the APFD. Now again BNHS has initiated to conserve this rare species through intensive research with the help of Darwin Initiative U.K. The collaborative project between BNHS, Royal Society for the Protection of Birds (RSPB), universities of Cambridge and Reading, along with APFD have made considerable progress over the past four years. This includes learning of three new locations inside and outside the Sri Lankamasaleswara Wildlife Sanctuary, describing and recording the call of the bird, and getting important information on the habitat features where birds have been located using a newly developed tracking-strip method and by tape-responses to a recording of the call. But still, very little information is available about their ecology, habitat requirements and geographical distribution. In order to learn important details about where Jerdon's Coursers feed, roost, and nest, and to better interpret the data gathered so far, attaching radio-transmitters on this bird would be the next important step to take.

For the bird which is nocturnal, rare and difficult to find, radio-telemetry would be the best way to study and in turn to conserve it. This proposal was put forward by BNHS and



Radio tagging will help to survival the secret life of the critically endangered Jerdon's Courser

we were asked to demonstrate this method to the forest officials by APFD. Before going for the rare and critically endangered species we thought it would be better to demonstrate this method on a common bird so that it would be easier for the officials to track them in the field and also relatively easy to capture. Though the Indian Courseter *Cursorius coromandelicus* were present in that place, we preferred Red-wattled Lapwings. Not only that it is common, it is also having similar body size and nocturnal behavior to that of the Jerdon's Courser. This is how the Red-wattled Lapwing was selected as a proxy for the Jerdon's Courser.

Three Red-wattled Lapwings were tagged during this demonstration workshop, which was held on August 2003. Two individuals were caught by noosing in the daytime and one by harpooning during the nighttime.

Expert BNHS trappers Mr. Ali Hussein and Mr. Mohammad Qasim caught the three Red-wattled Lapwings. The place where we caught these birds was flat, grazed and completely open located near a small pond. Noosing is easier for the diurnal species since after setting up the noose a person can watch from distance whether



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target species gets caught or not. But it may not be the best way to catch the Jerdon's Courser since it is nocturnal and it affects mainly lightly wooded scrub jungle with open patches. The best way to capture a Jerdon's Courser would be by dazzling it with a torch. Conventionally, the Jerdon's Courser has been sighted during night-time walks in lightly wooded scrub jungle, during which the observer scans the ground with a torch, while an electrical buzzer is used to mask the footfalls. Same method can be followed to capture them. As soon as a Jerdon's Courser has been spotted within the distance of about less than 15 m, it can be caught by lowering the hand-net on it by the experienced trappers as they did for the Red-wattled Lapwings.

Once captured, a small radio-tag would be fitted at the base of the bird's back by gluing it directly onto the skin. The tag will be about 2% of the bird's body mass. It could take approximately 20 minutes to fit a tag. The tag will operate for about 3 months, after which it will fall off. After a bird has been fitted with the radio-tag and released, it will be searched at night using a radio receiver to obtain fixes of their locations with no disturbance to the bird. In this way within three months it would be possible to build up a picture of the way Jerdon's Coursers use the scrub forest for various activities.

Jerdon's Courser roost during the day, for which they could be using different habitats within the scrub forest than that used for feeding. It is very difficult to locate the Jerdon's Courser during the day. More importantly, nothing is known of the habitat used for breeding by Jerdon's Courser because so far no nests have ever been found. Radio-tracking would facilitate to begin investigations into their roosting and breeding habitat requirements. Apart from that, it is possible to estimate the number of individuals present in an area by measuring the ratio of untagged to tagged individuals responding to tape playback. Since the number of tagged individuals is known, the total number of individuals present could be obtained using this ratio. It would also be possible



A Red-wattled Lapwing with radio tag on its back.

to measure the proportion of occasions on which a radio-tagged Jerdon's Courser responds to tape playback by calling when it is within 250 metres. This estimate of survey efficiency would be of great help in converting the result of tape transects directly to density estimates.

Apart from that, marking the individuals by color rings and recapturing them visually through night search or by automatic cameras traps (See more details for methods in *Mistnet, Vol.3 (1) 2002*), would facilitate in estimating the population size. It is possible that individual Jerdon's Coursers occupy a home range within a known area for only part of the year. Birds could migrate to other areas or other habitats at different times of year. This can only be investigated only by radio-tracking. Thus, radio-tracking would reveal information about Jerdon's courser that could not be gained by any other way. The information gained from radio-tracking would be of direct and immediate value for conservation.

The demonstration of the radio-tagging method for the APFD officials was successful. Officials were convinced that this method is safe and definitely it would be very much helpful in the conserving the Jerdon's Courser. As a result they have given us the permission to catch the Jerdon's Courser and forwarded our proposal to the Ministry of Environment and Forests, Government of India.

Few days after these demonstration

I went with the antenna and receiver to the place where we have tagged and released these Red-wattled Lapwings. I was able to track down two of them near a small pond. When I went closer they were agitated and start calling. It seems they also understood the importance of radio-tracking because this time their calls sounds more like "Pity-and-de-de-de".

#### FLASH NEWS

We are glad to inform that the Ministry of Forest and Environment (MoEF), Government of India has granted permission for doing radio-telemetry studies on the Jerdon's Courser. We have received the official letter from Shri S. K. Chakha, Joint Director (Wildlife), MoEF, in this regard on 14th March 2005. Also Mr. Hitesh Mahoria, Chief Wildlife Warden, Andhra Pradesh has given no objection certificate to catch the Jerdon's Courser's. It should be noted that this permission is only for catching two individual Jerdon's Courser's. After conducting the research and presenting the results, Andhra Pradesh Forest Department agreed to give the permission to catch two more individuals. The Bombay Natural History Society is going to conduct this study along with the Royal Society for the Protection of Birds, U.K. and the fieldwork will start soon in the Sri Lankameswara Wildlife Sanctuary, Cuddapah District, Andhra Pradesh. We thank the Ministry of Forest and Environment (MoEF), Government of India and the Andhra Pradesh Forest Department for granting us permission to conduct this study.

- Dr. Anand R. Nathani,  
Director, BNMHS